DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	SHOAL POND	Lake Area (ha):	2.43
Town:	LINCOLN	Maximum depth (m):	0.9
County:	Grafton	Mean depth (m):	0.3
River Basin:	Merrimack	Volume (m^3):	7500
Latitude:	44°09'52" N	Relative depth:	0.5
Longitude:	71°27'28" W	Shore configuration:	1.45
Elevation (ft):	2540	Areal water load (m/yr):	25.75
Shore length (m):	800	Flushing rate (yr^{-1}):	85.80
Watershed area (ha):	58.7	P retention coeff.:	0.45
% watershed ponded:	0.0	Lake type:	natural

BIOLOGICAL:			29 July 1993
DOM. PHYTOPLANKTON (% TOTAL)	#1		NET PHYTOPLANKTON
	#2		SPARSE - NO DOMINANT
	#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)			640
CHLOROPHYLL-A (µg/L)			3.36
DOM. ZOOPLANKTON (% TOTAL)	#1		KERATELLA 92%
	#2		
	#3		
ROTIFERS/LITER			49
MICROCRUSTACEA/LITER			4
ZOOPLANKTON ABUNDANCE (#/L)			53
VASCULAR PLANT ABUNDANCE			Scat/Common
SECCHI DISK TRANSPARENCY (m)			0.8 Visible on bottom
BOTTOM DISSOLVED OXYGEN (mg/L)			7.0
BACTERIA (E. coli, #/100 ml)	#1		5
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None
Hypolimnion volume (m^3) : None
Anoxic volume (m^3) : None

CHEMICAL: Lake: SHOAL POND
Town: LINCOLN

			29 July 1993		
DEPTH (m)			0.5		
pH (units)			6.2		
A.N.C. (Alkalinity)			3.4		
NITRATE NITROGEN			< 0.02		
TOTAL KJELDAHL NITROGEN			0.53		
TOTAL PHOSPHORUS			0.023		
CONDUCTIVITY (μmhos/cm)					
APPARENT COLOR (cpu)			120		
MAGNESIUM			0.23		
CALCIUM			2.0		
SODIUM			1.5		
POTASSIUM			< 0.40		
CHLORIDE			< 3		
SULFATE			1		
TN : TP			23		
CALCITE SATURATION INDEX			4.3		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1993

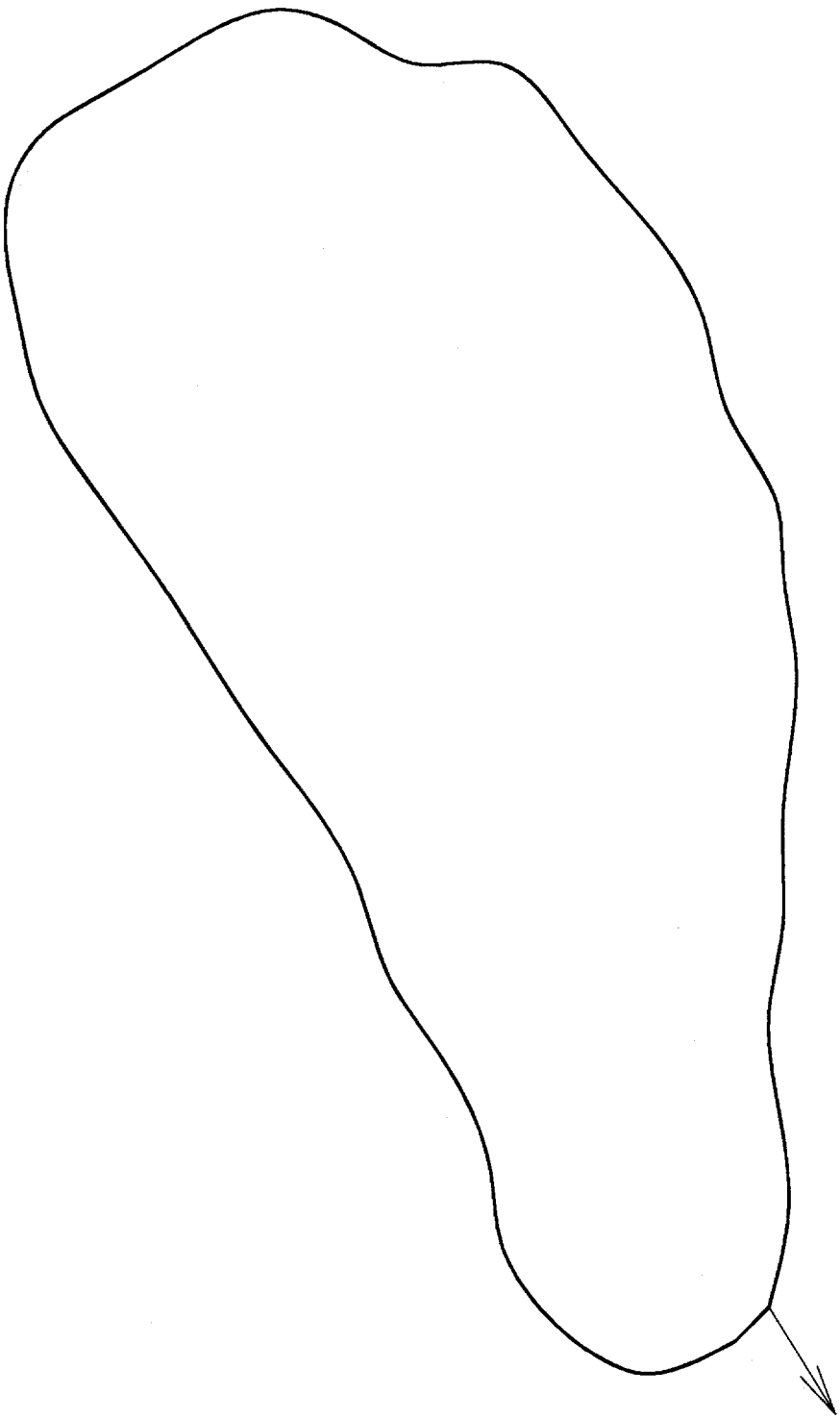
D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	3	2	0	5	Meso.

COMMENTS:

1. This is a very shallow (less than 3 feet deep) six acre remote pond located in the White Mountain National Forest. No water was found in the winter (the ice went to the bottom) so no winter results are provided.

2. An estimated Secchi depth was used since the bottom was visible, and this accounted for 3 of the 5 trophic points. One less point and the pond would have been rated oligotrophic.

3. Oocystis (35%) and Elakatothrix (15%) were the dominant genera of wholewater phytoplankton.



Shoal Pond

Lincoln

N

0 0.1

Km

all less than 3 feet deep

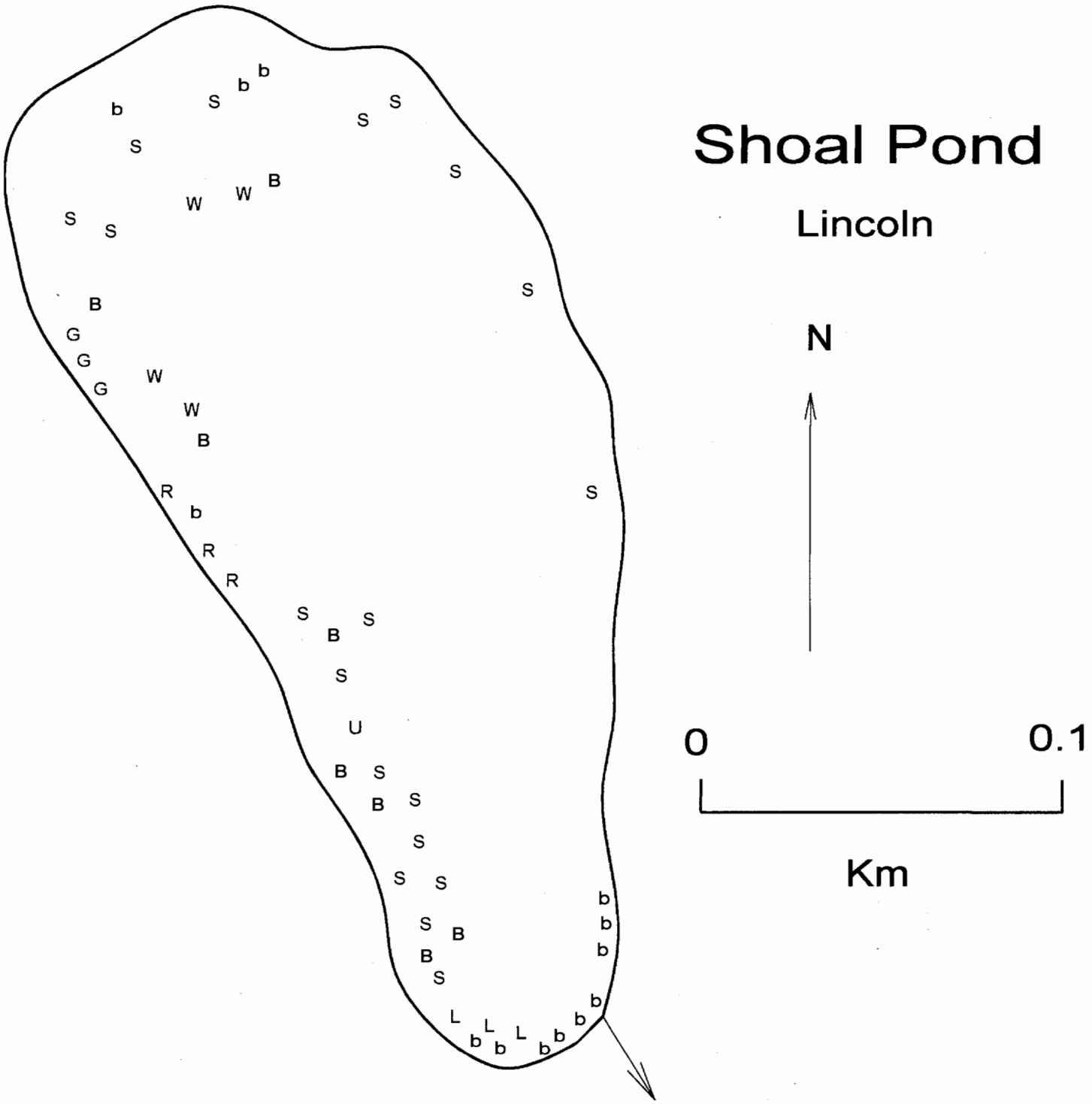
FIELD DATA SHEET

LAKE: SHOAL POND TOWN: LINCOLN
DATE: 07/29/93 WEATHER: HARD RAIN

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.3	24.2	7.0	81 %

SECCHI DISK (m): 0.8 VOB COMMENTS:
BOTTOM DEPTH (m): 0.8
TIME: 800

*Dissolved oxygen values are in mg/L


Shoal Pond
Lincoln
N
0
0.1
Km

AQUATIC PLANT SURVEY

LAKE: SHOAL POND TOWN: LINCOLN DATE: 07/29/93

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
S	Sparganium	Bur reed	Scattered
C	Chamaedaphne calyculata	Leatherleaf	Abundant
B	Brasenia schreberi	Water shield	Sparse
b	Cyperaceae	non-flowering sedge	Sparse
W	Potamogeton amplifolius	Bass weed	Sparse
R	Sarracenia purpurea	Pitcher-plant	Sparse
U	Utricularia	Bladderwort	Sparse
L	Lysimachia terrestris	Swampcandle	Sparse
G	Gramineae	Grass family	Sparse

OVERALL ABUNDANCE: Scat/Common

GENERAL OBSERVATIONS:

1. Leatherleaf was abundant around the entire shoreline and sedges were common at the north and south ends of the pond, but the plants were mostly scattered in the pond proper; thus an overall rating of scat/common.